oligonucleotide hybridizes to a different region of said target nucleic acid of the probe oligonucleotide spot.

E3 cont

58. (Amended) An array comprising a pattern of probe oligonucleotide spots of a density that does not exceed about 400 spots/cm^2, wherein each probe oligonucleotide spot consists of a mixture of 3 to 20 unique oligonucleotides of different sequence and from about 25 to 100 nucleotides in length that hybridize to the same target nucleic acid, wherein each unique oligonucleotide hybridizes to a different region of the said target nucleic acid.

Sub. F4

60. (New) An array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support, wherein each probe oligonucleotide spot consists of a mixture of a plurality of 2 or more unique oligonucleotides of different sequence that cooperatively hybridize to the same target nucleic acid.

E4

61. (New) The array according to Claim 60, wherein said plurality of unique oligonucleotides hybridize to different regions of said target nucleic acid.

62. (New) The array according to Claim 61, wherein said plurality of unique oligonucleotides hybridize to non-overlapping regions of said target nucleic acid.

63. (New) The array according to Claim 61, wherein said plurality of unique oligonucleotides hybridize to overlapping regions of said target nucleic acid.

64. (New) The array according to Claim 60, wherein two or more different target nucleic acids are represented in said pattern.

Sub H8

65. (New) The array according to Claim 64, wherein each probe oligonucleotide spot in said pattern corresponds to a different target nucleic acid.

66. (New) The array according to Claim 64, wherein two or more probe oligonucleotide spots in said pattern correspond to the same target nucleic acid.

67. (New) The array according to Claim 60, wherein said array comprises a plurality of said patterns.

68. (New) The array according to Claim 67, wherein said plurality of patterns are separated from each other by walls.

E4 cont

69. (New) The array according to Claim 60, wherein each of said oligonucleotides ranges from about 15 to 150 nucleotides in length.

70. (New) The array according to Claim 60, wherein said array further comprises at least one mismatch probe.

71. (New) The array according to Claim 60, wherein said plurality ranges from about 3 to 50 oligonucleotides in number.

Sub H9

72. (New) The array according to Claim 60, wherein all of said oligonucleotide spots correspond to the same type of target nucleic acid.

73. (New) The array according to Claim 60, wherein the spots on said array do not exceed a density of about $1000/cm^2$.

74. (New) The array according to Claim 73, wherein the spots on said array do not exceed a density of about $400/cm^2$.

75. (New) The array according to Claim 60, wherein the spots on said array range from about 50 to 10,000 in number.

76. (New) The array according to Claim 60, wherein the spots on said array range from about 50 to 1,000 in number.